

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

In re Application of: Elliot Brenhouse

Serial Number: 10/086,661

Primary Examiner: John Y. Shin

Filed: February 28, 2002

Group Art Unit: 3687

Attorney Docket No. 80-20703721

For: SELF-CHECKOUT SYSTEM WITH ANTI-THEFT DEACTIVATION DEVICE

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APPELLANTS' BRIEF

As required under § 41.37(a), this brief is filed in furtherance of the Notice of Appeal filed on December 17, 2008. The Patent Office is hereby authorized to charge our Deposit Account No. 50-4581 the fee of \$540.00 required under Section 1.17(f).

In the event a fee is required or if any additional fee during the prosecution of this application is not paid, the Patent Office is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 50-4581.

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This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1206:

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(I) **Real Party in Interest**

The real parties in interest for this appeal are the inventor, Elliot Brenhouse, and the assignee, Optimal Robotics Corp. (collectively “Appellants”).

(II) **Related Appeals and Interferences**

There are no appeals or interferences.

(III) **Status of Claims**

Claims 1-3, 6, 8-16 are pending. In a final Office Action dated July 24, 2008, claims 1-3, 6, 8-16 were rejected under 35 U.S.C. §103(a) as obvious over U.S. Pat. No. 6,497,361 to Mason (hereinafter “Mason”) in view of U.S. Pat. No. 6,102,290 to Swartz et al. (hereinafter “Swartz”). This rejection is being appealed.

(IV) **Status of Amendments**

In an Office Action dated September 14, 2005, claims 1-4 and 7-15 were rejected under 35 U.S.C. §102(b) as anticipated by U.S. Pat. No. 6,497,361 to Mason (hereinafter "Mason"), and claims 5, 6 and 16 were rejected under 35 U.S.C. §103(a) as obvious in view of Mason.

On March 13, 2006, Appellants filed a Request for Reconsideration and a Response to the Office Action dated September 14, 2005.

In a final Office Action dated February 1, 2007, claims 1-4 and 7-15 were rejected under 35 U.S.C. §102(b) as anticipated by U.S. Pat. No. 6,497,361 to Mason, and claims 5, 6 and 16 were rejected under 35 U.S.C. §103(a) as obvious in view of Mason.

On May 1, 2007, Appellants filed a Response to the final Office Action dated February 1, 2007.

A Notice of Non-Compliant Amendment was issued on May, 16, 2007.

On May 23, 2007, Appellants filed a Response to the Notice of Non-Compliant Amendment and an amended Response to the final Office Action dated February 1, 2007.

An Advisory Action was issued on June 12, 2007.

On June 25, 2007, Appellants filed a Request for Continued Examination and a Response to the Office Action dated February 1, 2007.

In an Office Action dated November 14, 2007, claims 1-3 and 5-16 were rejected under 35 U.S.C. §102(e) as anticipated by U.S. Pat. No. 6,497,361 to Mason.

On April 14, 2008, Appellants filed a Response to the Office Action dated November 14, 2007.

In a final Office Action dated July 24, 2008, claims 1, 3, 6, 8-16 were rejected under 35 U.S.C. §103(a) as obvious over U.S. Pat. No. 6,497,361 to Mason in view of U.S. Pat. No. 6,102,290 to Swartz et al. (hereinafter "Swartz").

On October 24, 2008, Appellants filed a Response to the Final Office Action dated July 24, 2008.

An Advisory Action was issued on December 5, 2008.

Appellants filed a Notice of Appeal on December 17, 2008

(V) **Summary of Claimed Subject Matter**

Appellants' invention incorporates an anti-theft solution, in which electromagnetic anti-theft tags are attached to articles ("items") for purchase, into a self checkout system without sacrificing the convenience, reliability and ease of operation features of the self-checkout system. As a result of Appellants' claimed systems and methods, customers using a self-checkout system are able to deactivate anti-theft labels when a legitimate purchase is self-scanned at the point-of-sale, enabling shoppers to purchase merchandise with little or no assistance from store personnel. See, e.g., Spec. page 2, line 22- page 3, line 4.

Furthermore, Appellants' invention provides greater efficiency and user-friendliness by determining the presence of an anti-theft tag on an article being purchased. By determining whether an article has an anti-theft tag attached, the system may react more passively toward the purchasing of items that do not have tags attached and more restrictively toward items having tags attached. For example, when purchasing items not having a tag attached, the system may not require the user to pass the article through the predetermined region over the deactivation device, causing the checkout process to be more efficient. See, e.g., Spec. page 4, lines 10-17.

For example, the system can be alerted as to the presence of a tag on an article by the inclusion of information in the product lookup database identifying articles having anti-theft tags attached. Once the bar code on an item is scanned by the bar code reader, the lookup database is referenced to determine whether the particular item has a tag attached. Use of this feature as part of Appellants' claimed systems and methods can lower customer frustration and increase system efficiency, because the customer is not required to pass articles identified as not having a tag attached through the predetermined region over the deactivation device. See, e.g., Spec. page 4, line 18- page 5, line 2.

Additionally, Appellants' invention provides systems and methods for self-checkout of an article with an electromagnetic anti-theft tag attached thereto. In accordance with an embodiment, the systems and methods comprise providing a deactivation device, a sensor, a bar code reader and a scale, wherein the deactivation device is positioned along the path of movement of the article from the bar code reader to the scale. The sensor is positioned and adjusted to monitor movement of an object within a predetermined region over the deactivation device. An audible or visual prompt may be provided instructing a user to pass the article with the anti-theft tag attached thereto over the deactivation device at a suitable height, after the bar code on the article is scanned by the bar code reader. If the article was not moved by the user to pass through the deactivation region over the deactivation device before placement of the item on the scale (or integrated bagging platform or bag holding device), the user may be prompted with an instruction to pass the last item scanned through the deactivation region. See, e.g., Spec. page 5, lines 10-22.

The independent claims at issue, claims 1 and 16 recite the following:

| CLAIM | Reference To Specification By Page And Line Number |
|---|--|
| <p>1. A customer self-checkout system for processing article purchases of articles, the system comprising:</p> <p style="padding-left: 40px;">a self-checkout station comprising:</p> <p style="padding-left: 80px;">an input device configured to receive product code input designating an article for purchase;</p> <p style="padding-left: 80px;">a deactivation device configured to produce a deactivation region effecting deactivation of a security tag attached</p> | <p>See, e.g., Spec. page 7, line 20- page 8, line 3.</p> <p>See, e.g., Spec. page 7, line 16-19.</p> <p>See, e.g., Spec. page 8, line 18- page 9, line 23.</p> |

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| <p>to the article for purchase;</p> <p>a sensor for sensing the presence of the article within the deactivation region;</p> <p>a database system coupled to the self-checkout station and comprising stored data identifying articles having attached security tags and articles not having attached security tags;</p> <p>a processor configured to receive product code input from the input device and to query the database to determine whether the article designated by said received product code input has an attached security tag;</p> <p>a prompting system configured to present a deactivation prompt to direct a user to position the article for purchase within the deactivation region to effect the security tag deactivation, wherein the prompting system is configured to present the deactivation prompt after the receipt of the product code by the input device and prior to deactivation of the article; and wherein the prompting system is configured to present the deactivation prompt when the article has an attached security tag and to (i) not present the deactivation prompt and (ii) present a prompt to ignore the deactivation area, when the article does not have an attached security tag.</p> | <p>See, e.g., Spec. page 11, lines 8-22.</p> <p>See, e.g., Spec. page 4, lines 18-22; Spec. page 12, line 20 – page 13, line 7.</p> <p>See, e.g., Spec. page 8, lines 4-17.</p> <p>See, e.g., Spec. page 12, lines 7-19.</p> <p>See, e.g., Spec. page 12, line 20 – page 13, line 8.</p> |
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| <p>16. A customer self-checkout system for processing article purchases of articles, the system comprising:</p> <ul style="list-style-type: none"> a self-checkout station comprising: <ul style="list-style-type: none"> an input device configured to receive product code input designating an article for purchase; a deactivation device configured to produce a deactivation region effecting deactivation of a security tag attached to the article for purchase; a sensor for sensing the presence of the article within the deactivation region; a target visibly disposed proximate the deactivation region; a bagging platform comprising a bag holder adapted to hold a bag for receiving the articles and a scale operatively configured to detect weight of the bagged articles; a database system coupled to the self-checkout station and comprising stored data identifying the articles having attached security tags and articles not having attached security tags; a processor coupled to the input device, the sensor, the bagging platform and the database, and the processor being configured to receive product code input from the input device and to query the database to determine whether the article designated by | <p>See, e.g., Spec. page 7, lines 3-15; Spec. page 7, line 20- page 8, line 3.</p> <p>See, e.g., Spec. page 7, line 16-19.</p> <p>See, e.g., Spec. page 8, line 18- page 9, line 23.</p> <p>See, e.g., Spec. page 11, lines 8-22.</p> <p>See, e.g., Spec. page 10, lines 9-20.</p> <p>See, e.g., Spec. page 11, line 8 -- page 12, line 19.</p> <p>See, e.g., Spec. page 4, lines 18-22; Spec. page 12, line 20 -- page 13, line 7.</p> <p>See, e.g., Spec. page 8, lines 4-17.</p> |
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| <p>received product code input has an attached security tag; and</p> <p>a prompting system configured to present,</p> <ul style="list-style-type: none"> a prompt directing a user to enter a product code using the input device; a first deactivation prompt to direct a user to position the article for purchase within the deactivation region to effect the security tag deactivation when a database query determines that the article has an attached security tag, wherein the prompting system is configured to present the deactivation prompt after the receipt of the product code by the input device and prior to deactivation of the article; a second deactivation prompt when a weight change is detected by the bagging scale and the sensor has not sensed presence of the article within the deactivation region; and a feedback prompt to confirm deactivation of the security tag after the sensor senses presence of an article within the deactivation region, <p>wherein the prompting system is configured to not present the first deactivation prompt, the</p> | <p>See, e.g., Spec. page 7, line 16-19;</p> <p>See, e.g., Spec. page 12, lines 7-19; Spec. page 4, lines 18-22; Spec. page 12, line 20 – page 13, line 7.</p> <p>See, e.g., Spec. page 14, lines 6-10.</p> <p>See, e.g., Spec. page 10, line 9 – page 11, line 7.</p> <p>See, e.g., Spec. page 12, line 20 – page 13, line 8.</p> |
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| <p>second deactivation prompt, and the feedback prompt when the database query determines that the article does not have an attached security tag, and, wherein the prompting system is configured to present a prompt to ignore the deactivation area when the database query determines that the article does not have an attached security tag.</p> | <p>See, e.g., Spec. page 12, line 20 – page 13, line 8.</p> |
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(VI) **Grounds of Rejection to be Reviewed On Appeal**

In a final Office Action dated July 24, 2008, claims 1-3, 6, 8-16 were rejected under 35 U.S.C. §103(a) as obvious over U.S. Pat. No. 6,497,361 to Mason in view of U.S. Pat. No. 6,102,290 to Swartz et al. This rejection is being appealed.

(VII) Argument

Claims 1-3, 6, 8-16 were rejected under 35 U.S.C. §103(a) as obvious over U.S. Pat. No. 6,497,361 to Mason in view of U.S. Pat. No. 6,102,290 to Swartz et al. This rejection is being appealed.

In summary, Mason and Swartz solve a different problem than the one solved by Appellants' claimed invention. Both Mason and Swartz disclose self-checkout systems that deactivate the security tags attached to the purchased items. This limitation in the prior art requires that every item purchased through the self-checkout system be equipped with a security tag. Appellants' invention greatly improves on the prior art by claiming efficient and effective self-checkout systems and methods for the purchase of items that may or may not be equipped with anti-theft tags.

Independent claims 1 and 16 explicitly require a prompting system that "is configured to present the deactivation prompt after the receipt of the product code by the input device and prior to deactivation of the article." Appellants respectfully submit that this feature of the present invention is neither taught nor suggested by Mason, Swartz or the combination thereof.

On page 3 of the final Office Action, it is concluded that this feature is anticipated by Mason's "touch-screen display 24" and Mason's "speaker 34." Appellants respectfully disagree.

As an initial matter, it should be noted that the Examiner's conclusion is not supported by any argument. As shown below, on page 3 of the final Office Action, Mason's touch-screen display "24" and speaker "34" are cited with absolutely no reasoning or any citation in Mason on how they read on the above-mentioned limitation in independent claims 1 and 16. The following is a direct quotation of that portion of the Office Action:

"a prompting system **24, 34** configured to present a deactivation prompt to direct a user to position the article for purchase within the deactivation region to effect the security tag deactivation, wherein the prompting system is configured to present the deactivation prompt after the receipt of the product code by the input device"

Final Office Action dated 7/24/2008, page 3, lines 4-8 (emphasis added).

While not cited by the Examiner, the best support for the Examiner's rejection can be found in Mason at column 4, lines 8-20:

In step 98 of FIG. 2, if the system determines that the merchandise that was purchased matches the merchandise placed in the itemization area, then the system will activate the EAS deactivator 42. The item will then be moved into the itemized area 44 for bagging. As discussed above, one way of accomplishing this is to provide an automatic conveyor belt that would position that item in the itemization area and then carry it away once the EAS tag has been deactivated. In another embodiment, the customer manually moves the item from the itemization area to the itemized area, prompted as necessary by touch-screen display 24 and speaker 34. The system then returns to step 92 and repeats the process for the next item.

Mason, Col. 4, lines 8-20.

Nevertheless, Appellants respectfully submit that Mason's disclosure does not anticipate Appellants' claimed interactive prompting system.

Mason discloses a system having (1) an *itemization* area and (2) an *itemized* area. The actions of (i) bar code scanning; and (ii) tag deactivation *both* happen in the itemization area. See Mason, col. 3, lines 16-52. If the item has no bar code, the user enters item codes when the products are within the itemization area, after which the items are deactivated in the itemization area. See Mason, col. 3, lines 56-66. **In either case, there is no movement from scanning/identifying to deactivation and no prompting is done between these steps.** The items are then moved from the itemization area to the itemized area for bagging. See Mason, col. 2, lines 37-44. Since both bar code scanning and tag deactivation happen in the same "itemization" area, no movement or user intervention is required between these steps, and thus a prompt would not be necessary. Therefore, not only is there no deactivation prompt between the scanning and the tag deactivation, as explicitly recited in Appellants' claimed invention, but none would be necessary or desired in Mason.

In Mason's invention, it would be counterproductive and illogical to prompt the user when no user intervention is required. The prompts disclosed in Mason at column 4, lines 16-19 take place after deactivation. Therefore, they cannot be "deactivation prompts" and are not "presented prior to deactivation of the article" as explicitly claimed in Appellants' independent

claims 1 and 16. For at least this reason, Mason's disclosure does not anticipate the prompting system that "is configured to present the deactivation prompt after the receipt of the product code by the input device and prior to deactivation of the article," as explicitly recited in Appellants' claims 1 and 16.

Furthermore, the addition of Swartz does not cure the above-mentioned deficiencies in Mason. On page 4 of the Final Office Action, Swartz was cited to read on Appellants' "database system coupled to the self-checkout station and comprising stored data identifying articles having attached security tags and articles not having attached security tags," as explicitly recited in independent claims 1 and 16. Appellants' respectfully submit that these features of the present invention are neither taught nor suggested by Swartz, Mason or the combination thereof.

Swartz merely discloses scanning systems designed to prevent article theft, wherein the security tag at the deactivator is compared to the security tag at time of purchase. If the security tag at the deactivator matches the security tag at time of purchase, deactivation is allowed. Otherwise it is not. See, e.g., Swartz Figs 7(a)(b); 9(a)(b); 12(a)(b); and col. 20, lines 33-48. However, as discussed in detail below, **Swartz never envisaged situations where the product to be scanned does not have an attached security tag**.

All of the references in Swartz cited by the Examiner, namely claim 1, figures 9-10 and corresponding text, as well as remaining specification not discussed by the Examiner, refer to such anti-theft systems, NOT to non-tagged items. For example, discussing Figure 9 in column 19, lines 22-30, Swartz discloses that value of a symbol (tag) is "stored in memory" during a purchase of an item in "step 186". During tag removal or deactivation, the symbol is "compared with the symbols of the hanger tags previously stored at Step 186" (Swartz col. 20, line 5-8.) This prevents a customer "from removing surveillance tags 126 from articles other than those articles purchased." (Swartz col. 20, line 35-37.) Figures 10(a), 10(b) and claim 1 all involve the same subject matter. (Swartz col. 22, lines 49-56; col. 25, lines 3-7; Claim 1) Non-tagged items are never discussed.

Since Swartz does not even consider situations where an article does not have a tag, Swartz cannot possibly read on "a database system coupled to the self-checkout station and comprising stored data identifying articles having attached security tags and articles **not having attached security tags**" as explicitly recited in Appellants' independent claims 1 and 16.

It is well established that, to support a *prima facie* case of obviousness, the combination of references must have all of the claimed limitations. Obviousness under §103 requires one to look at (1) the scope and content of the prior art, (2) any differences between the claimed invention and the prior art, (3) the level of skill in the art; and (4) any relevant objective evidence of obviousness or non-obviousness. *KSR Intern. Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734 (2007). Since, as discussed above in detail, Mason and Swartz, individually or combined, do not have all of the claimed features, Appellants respectfully submit that claims 1 and 16 are allowable over Mason, Swartz and the combination thereof.¹ In fact, these references solve a different problem than the one solved by Appellants' claimed invention, namely an efficient and effective self-checkout systems and method for *the purchase of items that may or may not be equipped with anti-theft tags*.

Claims 2, 3, 6 and 8-15 are dependent on and include all of the limitations of claim 1. therefore, all of the above arguments made with respect to independent claim 1 are equally as applicable to claims 2, 3, 6 and 8-15. For at least this reason, Appellants respectfully submits that claims 2, 3, 6 and 8-15 are allowable over Mason, Swartz and the combination thereof.

Finally, various USPTO Examiners issued four Office Actions rejecting the claimed invention over Mason. The Examiners had multiple opportunities to search the prior art, but found not more than Mason and Swartz in support of the rejection of Appellants' claimed invention. As discussed above, these references solve a different problem than the one solved by Appellants' claimed invention, namely an efficient and effective self-checkout systems and method for *the purchase of items that may or may not be equipped with anti-theft tags*. If the Board is persuaded by Appellants' arguments, in the interest of fairness and justice, Appellants respectfully request of the Board to immediately allow all the claims without remanding the Application to the Examiner for further prosecution.

¹ *Takeda Chemical Industries, Ltd. v. Alphapharm Pty., Ltd.*, 492 F.3d 1350, 1357 (Fed. Cir. 2007) ("While the KSR Court rejected a rigid application of the teaching, suggestion, or motivation ('TSM') test in an obviousness inquiry, the Court acknowledged the importance of identifying 'a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does' in an obviousness determination.")

(VIII) Claims

1. (Previously presented) A customer self-checkout system for processing article purchases of articles, the system comprising:
 - a self-checkout station comprising:
 - an input device configured to receive product code input designating an article for purchase;
 - a deactivation device configured to produce a deactivation region effecting deactivation of a security tag attached to the article for purchase;
 - a sensor for sensing the presence of the article within the deactivation region;
 - a database system coupled to the self-checkout station and comprising stored data identifying articles having attached security tags and articles not having attached security tags;
 - a processor configured to receive product code input from the input device and to query the database to determine whether the article designated by said received product code input has an attached security tag;
 - a prompting system configured to present a deactivation prompt to direct a user to position the article for purchase within the deactivation region to effect the security tag deactivation, wherein the prompting system is configured to present the deactivation prompt after the receipt of the product code by the input device and prior to deactivation of the article; and wherein the prompting system is configured to present the deactivation prompt when the article has an attached security tag and to (i) not present the deactivation prompt and (ii) present a prompt to ignore the deactivation area, when the article does not have an attached security tag.
2. (previously presented) The system of claim 1 wherein the prompting system is configured to present an initial prompt directing a user to enter a product code using the input device.
3. (previously presented) The system of claim 2 further comprising:
 - a target visibly disposed proximate the deactivation region at the checkout station; and wherein the deactivation prompt instructs the user to move the article to touch the target to effect security tag deactivation.
4. (cancelled).

5. (cancelled).
6. (previously presented) The system of claim 1 wherein the prompting system is further configured to present the deactivation prompt when the stored data associated with the article does not indicate whether said article has an attached security tag or not.
7. (cancelled).
8. (original) The system of claim 7 further comprising:
a bagging platform comprising a scale operatively coupled to the prompting system and configured to detect weight of bagged articles; and wherein
the prompting system is configured to present the deactivation prompt when a weight change is detected by the bagging scale and the sensor has not sensed presence of the article within the deactivation region.
9. (previously presented) The system of claim 8 wherein the prompting system is configured to present a bagging prompt providing instructions to a user to place the article into a bag on the bagging platform.
10. (original) The system of claim 8 wherein the bagging platform further comprises a bag holder adapted to hold a bag for receiving the articles.
11. (previously presented) The system of claim 1 wherein the prompting system is configured to present a feedback prompt to confirm deactivation of the security tag after the sensor senses presence of the an article within the deactivation region.
12. (original) The system of claim 11 wherein the feedback prompt comprises a prompt instructing the user to place the article in a bag.

13. (original) The system of claim 1 wherein the input device comprises a device selected from the group consisting of a bar code scanner, a scanner-scale module, a touch-screen display, and a keypad.
14. (currently amended) The system of claim 1 wherein the deactivation prompt comprises an animated prompt.
15. (previously presented) The system of claim 1, wherein the deactivation prompt is provided by an audio device.
16. (previously presented) A customer self-checkout system for processing article purchases of articles, the system comprising:
a self-checkout station comprising:
 an input device configured to receive product code input designating an article for purchase;
 a deactivation device configured to produce a deactivation region effecting deactivation of a security tag attached to the article for purchase;
 a sensor for sensing the presence of the article within the deactivation region;
 a target visibly disposed proximate the deactivation region;
 a bagging platform comprising a bag holder adapted to hold a bag for receiving the articles and a scale operatively configured to detect weight of the bagged articles;
 a database system coupled to the self-checkout station and comprising stored data identifying the articles having attached security tags and articles not having attached security tags;
 a processor coupled to the input device, the sensor, the bagging platform and the database, and the processor being configured to receive product code input from the input device and to query the database to determine whether the article designated by received product code input has an attached security tag; and
a prompting system configured to present,
 a prompt directing a user to enter a product code using the input device;
 a first deactivation prompt to direct a user to position the article for purchase within the deactivation region to effect the security tag deactivation when a database query determines that the article has an attached security tag, wherein the prompting system

is configured to present the deactivation prompt after the receipt of the product code by the input device and prior to deactivation of the article;
a second deactivation prompt when a weight change is detected by the bagging scale and the sensor has not sensed presence of the article within the deactivation region; and
a feedback prompt to confirm deactivation of the security tag after the sensor senses presence of an article within the deactivation region,
wherein the prompting system is configured to not present the first deactivation prompt, the second deactivation prompt, and the feedback prompt when the database query determines that the article does not have an attached security tag, and,
wherein the prompting system is configured to present a prompt to ignore the deactivation area when the database query determines that the article does not have an attached security tag.

17. (cancelled).

18. (cancelled).

19. (cancelled).

20. (cancelled).

21. (cancelled).

22. (cancelled).

23. (cancelled).

24. (cancelled).

25. (cancelled).

26. (cancelled).

27. (cancelled).

28. (cancelled).

(IX) **Evidence**

None.

(X) **Related Proceedings**

None.

Dated: March 17, 2008

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